

REMARKS

Claims 1-43 are pending. The Office Action rejects Claims 1-3, 6-15, 18-20, 24-33, and 35-42 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,876,639 to Cao ("Cao"). Claims 4, 5, 16, 17, 21, 22, 33, 34, and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cao in view of U.S. Pat. App. Pub. No. 2003/0016655 to Gwon ("Gwon").

Applicants have amended several claims as set forth in the above listing of amended claims to more particularly and distinctly claim the invention. These amendments are fully supported by the originally filed specification. In light of the amendments and subsequent remarks, Applicants respectfully submit that the claims are in condition for allowance.

The Rejection of Independent Claims 1, 18, and 35 under §102 is Overcome

Independent Claims 1, 18, and 35 ("the independent claims") are alleged to be anticipated by Cao. Applicants respectfully submit that in view of the amendments to the independent claims and the arguments set forth below, the independent claims are patentably distinct from Cao taken alone or in combination with any other cited reference.

Amended independent Claim 1 is directed to a method comprising maintaining a congestion control. The congestion control variably defines an allowable number of packets which can be sent in a packet-based communication between a first network element and a second network element before receipt of acknowledgement messages for sent packets. The allowable number of packets is reduced in case of packet loss during transmission. The method further comprises receiving a message indicating a handover of the first network element. The method additionally comprises changing, in response to the message, the congestion control to provide faster recovery rate of the allowable number after handover as compared to the recovery rate of the allowable number after a packet loss not caused by handover conditions. The allowable number was reduced due to the handover.

Independent Claim 18 is directed to a system and has been amended to recite features substantially similar to those recited in Claim 1 insofar as this discussion is concerned. Claim 35 has been amended to be an independent claim directed to an apparatus comprising at least one processor and at least one memory storing computer program code. Support for these amendments may be found, for example, on page 14, lines 5-10 of the application, which discusses a device implementing software according to an example embodiment of the invention. As is well known to a person having skill in the art, software is composed of computer program code stored on a memory, which, when run, is executed by a processor. Accordingly, the originally filed specification provides support for an apparatus comprising at least one processor and at least one memory storing computer program code as recited by amended Claim 35. Applicants have additionally amended Claim 35 to include features substantially similar to those recited in Claim 1 insofar as this discussion is concerned.

Briefly, Cao discusses a transmission control protocol handoff notification system and method. Cao teaches a system in which two handoff notification messages are received to direct the TCP protocol stack's control of a congestion window. The first handoff notification message indicates a start of a handover and directs the TCP protocol stack to freeze the server's congestion window and force the server to suspend its transmissions to the mobile host. The second message indicates that the handoff is over and directs the TCP protocol stack to resume transmission using the pre-handover context. *See*, Col. 4, lines 39-55 of Cao.

Accordingly, Cao explicitly teaches the receipt by a server of two handoff notification messages which act to freeze the congestion window size and cease transmission during the duration of handover such that the size of the congestion window is not reduced. In contrast, the amended independent claims recite receipt of only a single message indicating handover. In response to the message, a congestion control is changed to provide a faster recovery rate of an allowable number of packets which can be sent before receipt of acknowledgement messages for the sent packets after handover as compared to the recovery rate of the allowable number after a packet loss not caused by handover conditions. In this regard, and as recited by the independent claims, the

allowable number is reduced due to the handover.

Cao therefore explicitly teaches away from the claimed invention as Cao teaches freezing a congestion window, whereas the independent claims explicitly recite and contemplate that the allowable number is reduced due to packet loss caused by handover conditions and provide for a faster recovery than would occur if, for example, the packet loss was caused by network congestion. The claimed invention accordingly provides an advantage over Cao in that only one handover indication message is needed, thus requiring less signaling.

For at least the foregoing reasons, Applicants respectfully submit that Cao does not teach or suggest the amended independent claims. Moreover, none of the other cited references, taken alone or in combination with Cao, overcome the deficiencies of Cao. Applicants therefore respectfully submit that the independent claims are patentably distinct from the cited references, taken alone or in combination, such that the rejection of is overcome. Applicants further submit that the independent claims are in condition for allowance.

The Rejection of the Dependent Claims is Overcome

Because each of the dependent claims includes each of the recitations of a respective independent base claim, Applicants further submit that the dependent claims are patentably distinguishable from the cited references, taken alone or in combination, for at least those reasons discussed above. Accordingly, applicants respectfully submit that the rejections of the dependent claims are overcome and the dependent claims are in condition for allowance.

CONCLUSION

In view of the amended claims and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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